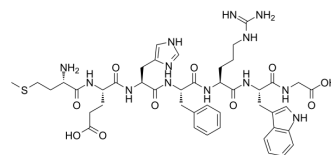


## Adrenocorticotropin Hormone (ACTH) (4-10), human

<b>Cat. No.:</b>	HY-P1478
<b>CAS No.:</b>	4037-01-8
<b>Molecular Formula:</b>	C <sub>44</sub> H <sub>59</sub> N <sub>13</sub> O <sub>10</sub> S
<b>Molecular Weight:</b>	962.09
<b>Sequence:</b>	Met-Glu-His-Phe-Arg-Trp-Gly
<b>Sequence Shortening:</b>	MEHFRWG
<b>Target:</b>	Melanocortin Receptor
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling
<b>Storage:</b>	Sealed storage, away from moisture
	Powder    -80°C    2 years
	-20°C    1 year



\* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 25 mg/mL (25.99 mM; Need ultrasonic)				
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>			
		<b>1 mM</b>	1.0394 mL	5.1970 mL	10.3940 mL
	<b>5 mM</b>	0.2079 mL	1.0394 mL	2.0788 mL	
	<b>10 mM</b>	0.1039 mL	0.5197 mL	1.0394 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (2.60 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (2.60 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (2.60 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Adrenocorticotropin Hormone (ACTH) (4-10), human is a melanocortin 4 (MC4R) receptor agonist.
<b>IC<sub>50</sub> &amp; Target</b>	Melanocortin 4 receptor <sup>[1]</sup>
<b>In Vitro</b>	Adrenocorticotropin Hormone (ACTH) (4-10), human (ACTH (4-10)) is the core sequence of all melanocortins and binds

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selectively to MC4-R. In humans, ACTH (4-10) enters the cerebral fluid compartment after intranasal application and leads to a decrease in total body fat after 6 weeks of continuous treatment<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

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[1]. Wellhöner P, et al. Intranasal application of the melanocortin 4 receptor agonist MSH/ACTH(4-10) in humans causes lipolysis in white adipose tissue. *Int J Obes (Lond)*. 2012 May;36(5):703-8.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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